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ECONOMY IN FOOD

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ECONOMY IN FOOD

The war is making us realize as never before how wasteful we have been in our use of food materials. Here are some of the points that we have found need of emphasizing.

A. ECONOMY IN BUYING

I. Cost and Food Value.

Examination of the Table of the Cost of One-hundred Calorie Portions of foods shows at once that it is possible to pay widely varying prices for amounts of food having the same fuel value. It is entirely possible, then, to take this into account in selecting food.

Meat, for example, is costly, as is most protein food. The United States Food Administration tells us that we eat, as a nation, 80 per cent more protein than we need. It is true that, except for Australia, we have a larger per capita consumption of meat than any other people.¹ It also tells us that too much protein is not only unnecessary but probably distinctly injurious. Here is one point to remember. Do not spend money foolishly in buying protein it is unwise for us to have. For suggestions in cutting down the use of meat, see the topic, "Economy in Planning Meals", on page 10.

Again, many vegetables and fruits are high in price compared to their actual fuel value. Consider, then, how much they are actually needed, and select as far as possible those which are less costly and supply the same elements. Include either a vegetable or a fruit in each meal, but not necessarily both.

Remember, however, that a certain amount of protein² and mineral salts,³ as well as vitamins,⁴ are absolutely essential to health, and that to buy food solely from the standpoint of cost

¹ See Wellman's "Food Study", pp. 181, 187.

² See Wellman: "Food Study", pp. 155, 186, and 298.

³ See Wellman: "Food Study", pp. 65-66 and 298-299.

⁴ See Wellman: "Food Study", p. 157.

would be a fatal mistake. Remember that, while the amount of these necessary substances required is not very great, the need for them is absolute.

Do not forget that whole milk is very necessary for children,¹ if they are to grow and develop properly, and that a liberal amount should be included in their diet.

II. Marketing.

Go to the market and grocery yourself, if possible, especially for perishable goods. But first look over your ice-box and supplies, and have a general plan in mind. Be prepared to change it if market conditions make it desirable to do so.

III. Amount to Buy.

A. Ask for definite amounts by weight or measure. A bag, bottle, pail or bucket, jar, basket, or "five cents' worth", are all indefinite terms. Make your butcher give you price per pound and weight of meat bought. Buy package goods which are clearly marked with the quantity they contain.

B. Buy only in quantities that you can use before deterioration. Buy, however, in as large quantities as you can plan to use without monotony, especially where by so doing you save a few cents or even a fraction of a cent; but it is not economy to buy an extra amount and have some to throw away. Non-perishable goods are cheaper bought in quantity. Note the net weight of package goods in relation to cost. A larger package is often much better value than a smaller.

IV. Buy Seasonable Food.

Some people use canned goods when they can buy fresh foods actually at less cost. Others buy hot-house products out of season.

V. Food Sold in Bulk instead of in package form is usually cheaper. If the food is to be reheated it is economy to buy it in the cheaper form. If it cannot be sterilized or properly cleaned by washing, it is true economy to buy the package form.

VI. Cooked Foods bought at delicatessen stores, etc., are usually expensive, as both fuel and labor are included in the price.

VII. Checking up Quantities Bought.

Housewives should see that they get the amount of material paid for. It is necessary to have a pair of scales and weigh often enough to be sure that your dealer is not sending you short weight. If he is careless and gives you now too little, now too much, tell him

¹ See Wellman: "Food Study", pp. 275 and 278.

you prefer to deal with some one who is more accurate. Don't be afraid of your store man.

If you buy by measure there are definite weights you should receive. You can obtain a table showing the weight of a bushel of various food commodities by applying to your State department of weights and measures. Divide those weights by 4, to find the weight of a peck. If the housewife prefers, she can keep standard measures and measure such goods as are not sold by weight. Remember that the liquid pint and quart are smaller than the corresponding dry measures.

VIII. Specific Suggestions in Buying.

1. MEATS.

Learn the cuts of meat,¹ the price paid per pound, and also the price per pound of edible meat. Apparent cheapness is often deceiving. Cheaper cuts are often more nutritious than more expensive ones.

Here are some figures given in Bulletin 158, University of Illinois Agricultural Experiment Station, 1912. While the present prices are not the same, nevertheless the figures show relative values.

BEEF	RETAIL PRICE PER POUND	COST OF EDIBLE MEAT PER POUND
Steaks:		
Porterhouse	25	27.2-28.9
Club or short	20	22.6
Sirloin	20	20.6-24.2
Flank	16	16
Round	15	15.3-16.0
Chuck	12	13.1-14.1
Roasts:		
Prime rib, 1st cut	20	22.9
Prime rib, last cut	16	18.8
Chuck	15	17.3
Rump	12	12.8
Boiling and stewing prices:		
Round, pot roast	10	10.1
Shoulder, pot roast	10	11.6
Brisket	8	8.7
Vane	7	7.7
Flank, stew	7	7.1
Fore shank, stew	7	7.0
Neck	6	7.0

¹ See Wellman's "Food Study", pp. 171 and 176-179.

2. EGGS.

Many people are prejudiced against cold-storage eggs.¹ At certain times of the year it is necessary to use them in order to have a sufficient egg-supply. While their flavor may not be so delicate for eating, they are good food, and at such seasons should be preferred for use in cooking, for they are much less expensive.

3. MILK.

Sour milk is valuable for making cottage cheese, or in baking, and should never be thrown away. Use it before it molds.

Skimmed milk and buttermilk, if they can be bought, cost less than whole milk. However, children need whole milk to drink, for they need the fat in the milk which contains a vitamine necessary to growth.

Canned milk keeps well and is sometimes cheaper for a small family.

Milk powder may also be used in cooking. It is made from skimmed milk.

Money spent for milk² gives a good return, for milk contains all the food principles as well as valuable mineral salts and vitamins.

4. TEA, COFFEE, and COCOA.

Tea and coffee have no fuel value except for the milk, cream or sugar added. Do not serve them oftener than necessary, and never to children. Black tea is probably less harmful than green. Coffee and tea bought in bulk are less expensive than in a carton or can.

Cocoa is cheaper bought in bulk than in tin. Unsweetened cocoa is better value than cocoa containing much sugar.

5. SUGAR.

Sugar often sells for a certain number of cents and a fraction of a cent. It is economy to buy a number of pounds which will make the cost an even number of cents.

6. CEREALS.

Flour usually costs the same in twenty-five pound sacks as by the barrel. Bought in ten-pound packages or less, the price is higher.

Bulk cereals, macaroni, and spaghetti, are less expensive than the package goods. Broken rice is as nutritious as whole rice, and less expensive.

¹ See Wellman's "Food Study", p. 48.

² See Wellman's "Food Study", p. 275.

Ready-to-eat cereals are more expensive than those which have not been cooked. If fuel must be burned merely to cook the cereal, that is another matter. However, a fireless cooker will solve that difficulty.

Home-made bread, if the baking or making is not included, is cheaper than baker's bread. Weight for weight, they are about equally nutritious.

7. YEAST.

Dried yeast is much cheaper than compressed. Liquid yeast is still less expensive; see p. 26.

8. FATS.

Butter is an expensive form of fat. Substitute other fats for it whenever possible. Keep all meat fats (ask the butcher to send home the trimmings) and try them out. This may readily be done by chopping them fine, putting them through a meat-grinder and heating them over water. When the fat has melted, pour it off. Strong fats may be made less strong by heating with a little milk, about a cup to a pound. Sour milk may be used. Strong fats may be flavored with onions, apples, bay leaves, sage, thyme, etc.

Butter can be made to go farther by churning it with milk. Put the butter into the milk, allowing a pint of milk and about one-half a teaspoonful of salt for a pound of butter.

Place the churn containing the milk in a pan of rather warm water, not too hot. Add the salt and the butter cut in thin slices. When the butter is thoroughly soft (but not melted), remove the churn from the warm water and beat until the butter has absorbed the milk. This should take only two or three minutes. Then place the churn in a pan of cold water and beat a minute or two longer. To mold the butter, pack it in a cake-pan lined with buttered paper and put it in a cold place to harden.

The butter should double in bulk. However, as a family tends to use rather more of this mixture than of the butter alone, it does not save half of the butter. Of course, the food value is not the same.

9. VEGETABLES AND FRUITS.

Fresh vegetables¹ and fruits should be bought in small quantities only; otherwise there is much waste from spoilage.

¹ See Wellman's "Food Study", p. 147.

B. ECONOMY IN STORING FOOD

Keep food in a cool cellar or in a refrigerator to avoid dust. Do not allow it to stand around in the dining-room or kitchen.

1. MEAT.

Meat requires constant care as it spoils easily. It should be kept in a cool place, and not left wrapped in paper. If it is placed directly on the ice, much juice is lost.

Meat in danger of spoiling can be kept longer if it is even partially cooked; or it may be saved by canning,¹ smoking or salting. In many cold climates meat may be preserved by freezing.

Cooked meat keeps rather better than its gravy; therefore it is best, especially in warm weather, not to put it away in the gravy.

2. EGGS.

Eggs should not be washed until they are about to be used, because the natural mucilaginous substances in the outside of the shell help to preserve them. They should not be kept with strong-smelling foods because they absorb odors.

To keep the yolk of an opened egg, cover it with cold water. To keep the white, cover closely and put in the ice-box.

Eggs, when cheap, should be "put down" in water glass² to preserve them for future use. One gallon of water glass will make enough solution to cover fifty dozen eggs. Boil and cool the water used before mixing. Scald the jars used in storing, and cover them tightly. Keep in a cool place. The eggs selected should be clean and fresh, but they should not be washed.

3. MILK.

Milk will readily absorb odors and should be kept away from other foods.

The souring of milk can be delayed by heating, and cooling rapidly. Milk may be pasteurized by placing it in the capped bottle on a rack in a kettle full of cold water deep enough to surround the milk entirely. Heat until the water is 140° F., and keep it at this

¹ Use cold-pack method. See p. 10, Wellman's "Food Study." Omit cold and hot dip. Allow $\frac{1}{2}$ tsp. salt to each pint. Do not add water. Sterilize 4-5 hours after water begins to boil, if raw meat is used. Or meat may be cooked and stock used to fill up jar. Sterilize three hours. Examine carefully before using canned meats, and discard if there is any sign of the materials having spoiled.

² See Wellman's "Food Study", p. 49.

temperature for twenty minutes. Remove the bottle, cool quickly, and put in cold water.

Milk may be kept cool by wrapping it completely in a wet cloth and letting it stand in a draft. The cloth must be kept wet.

4. COFFEE AND TEA.

Both coffee and tea retain their flavor better if packed in tightly-covered cans or jars rather than in paper bags.

Coffee bought unground in reasonably small amounts keeps satisfactorily. Only a little of it should be ground at a time.

5. SUGAR.

Sugar keeps well. Molasses and syrups will ferment if kept in too warm a place.

6. CEREALS.

Cereals and flour keep well except in warm weather, when there is danger of weevils developing. Buy them in smaller quantities during the summer.

7. FATS.

To keep fats, store them in a cool place, away from light and air. Stone crocks or tin cans are good containers.

Meat fats should be rendered before storing because they keep better than the animal tissue.

Butter that must be kept a long time should be melted slowly until it ceases to sputter and the fat separates from sediment and scum. If used in this form its flavor is not so good, but it keeps much better. It may later be churned with fresh milk before using.

Butter that is strong can be re-worked or washed in cold water, or it can be melted with a little soda ($\frac{1}{2}$ tsp. of soda to the pound). Churning with milk, so as to double the volume, also improves the flavor of poor butter. See p. 5.

8. VEGETABLES AND FRUITS.

Vegetables or fruits, in danger of spoiling, should be cooked. Corn, peas, and other vegetables which lose their sweetness on standing, should be cooked at once. They can be reheated in a double boiler, and are much better then than when cooked after standing.

Celery, lettuce, cucumbers, radishes, etc., should be kept wrapped wet in paper, or put in tightly-covered jars in a cool place.

Many winter vegetables can be kept in a cool cellar, buried in sand.

To prevent lemons from drying, keep immersed in cold water.

Vegetables and fruits may be canned for later use. This may be carried out by any of the three following methods:

1. Open-kettle Method.

For process, see Wellman's "Food Study", p. 7. This method is quicker than the second, but must be carefully carried out or the materials will spoil. It must be used for making preserves, jellies, etc., which require long cooking and condensing. Vegetables canned by this method must be cooked until tender in salted water. It is fairly satisfactory for acid vegetables.

2. Hot-water Bath Method.

For this process, see Wellman's "Food Study", p. 8. If vegetables are being canned, blanching (or scalding) in hot water first is necessary to clean, soften skins, or shrink material. The length of time depends upon the vegetables used (see time of sterilization below). They are next plunged in cold water. This is supposed to set the color. One tsp. salt to 1 quart jar is allowed; the jar is packed tightly and filled up with water. The time of sterilization varies with the fruit or vegetable. Intermittent sterilization is safer than a single long period.

Such goods should be emptied from the jar and reheated before using. Discard if they appear to be spoiled.

3. Pressure-cooker Method.

This is the same as the hot-water method except that a pressure cooker is used instead of the water bath. It saves time and fire, but the pressure cooker is expensive.

	TIME OF STERILIZATION	
	Hot-water Bath Method	Five Pounds Steam Pressure Method
Fruits		
1. Berries	20-30 minutes	8-10 minutes
2. Larger fruits	30-60 minutes	10-20 minutes
Vegetables		
1. Acid	20-30 minutes	10-15 minutes
2. Non-acid	1½-4 minutes	40-90 minutes

4. Cold-water Method.

This applies only to very acid fruits, such as cranberries, rhubarb, tomatoes, etc. The washed fruit is packed tightly in a jar, which is then put under a faucet and the cold water is allowed to run in for a few minutes. The jar should be immersed in water while it is sealed, to exclude all air.

JARS OR CANS

In any of these methods tin cans may be used in place of glass jars without danger if the contents are emptied as soon as the cans are opened. The first cost of the tins is less, but since glass jars can be re-used an unlimited number of times, the glass is really more economical. Of course, tin cans are more easily shipped than glass jars, and so are more often used commercially.

DRYING

Fruits and vegetables may also be preserved by drying. They should be absolutely fresh, young and clean, to give satisfactory results. After washing, put vegetables into a wire basket or cheesecloth bag and plunge into boiling water; drain, and dry with a towel as well as possible. Spread in a thin layer; stir or turn several times during the drying. If heat is used, be careful not to scorch. Begin drying at 110° F., increased gradually to 145° F. If an oven is used, have the door open. Open trays made of wire are excellent for this use. They should be protected by cheesecloth or paper, if acid fruits are dried.

Dried fruits and vegetables should be carefully stored. Paper bags with necks twisted and tied with string make good containers. They should be brushed over with melted paraffin. Air-tight tins or buckets are more easily used.

Dried fruits and vegetables should be soaked in cold water before cooking.

SALTING

Greens, like spinach, kale, dandelions, beet greens, and string beans, as well as corn, may be preserved by salting. Use fine salt, one-third to one-fourth the weight of the vegetables. Pack in a clean bag or stone crock in layers about 1 inch thick, sprinkling each layer heavily with salt. Cover with a clean cloth and use a cover or a board on the top. Freshen before use. Corn preserved

in this way should be cooked on the cob and cut off before packing. It has a finer flavor than canned corn.

Salted vegetables should be freshened by soaking in water before cooking.

C. ECONOMY IN SERVING FOOD

In general it is more economical to pass food at table and let people serve themselves to what they want. Make children understand that they may have more later if they desire it, but that all they take must be eaten. It is perhaps better to serve sugar than to pass it, if leaving sugar in the bottom of cups is to be avoided.

It is economy to cut bread only as needed. The loaf on the table is an old-fashioned custom, worthy of preservation.

D. ECONOMY IN PLANNING MEALS¹

Dr. Langworthy has made the suggestion that a well-balanced meal should include one food representing each of the following groups:

Group I. Foods rich in **Protein**. Dried beans, peas, eggs, nuts, meat, poultry, oysters, fish, milk, cheese, bread.

Group II. Foods rich in **Starch**. Cereals, potatoes, tapioca, macaroni, crackers, bread.

Group III. Foods rich in **Sugar**. Sweet cakes and desserts, honey, molasses, syrups, jellies, dried fruits, grapes, candy.

Group IV. Foods rich in **Fat**. Butter, oleomargarine; nut butter, cream, chocolate, nuts, olive and cotton-seed oils, lard, salt pork, suet and other cooking fats, rich cake and cookies.

Group V. Foods rich in **Regulators**. Mineral salts and acids. Fruits, vegetables, salads, milk.

PROTEINS IN THE DIET

Protein in the form of meat is expensive, so it is wise to know just how far from necessary it is.

Mistaken Notion of Value of Meat in the Diet.

Most people regard meat as an indispensable article of diet. They think that meat is necessary to make people strong and well. We read of the vigor of the old English yeomanry and how their sturdiness was due to the beef and ale of England. We have surely dropped the notion of ale or beer as strengthening, so we believe

¹ See Wellman's "Food Study", pp. 293-296.

perhaps more firmly than ever in the meat. But any one who studies the real conditions of English life during the Middle Ages, knows that the poorer classes were fortunate if they had meat once a week. Doctors and others who are experimenting on the subject say that many of the ills which were formerly believed to be due to insufficient protein in the diet, were really due to lack of mineral salts and vitamins.

Vegetarian Notions.

Scientists are ready to admit that the vegetarians are right to this extent, we can live and thrive without meat. However, to do so means most careful planning to include sufficient proteins in the diet, and as meat is admittedly a source of easily-digested protein we probably do well to use it in moderate amounts.

How Much Meat Do We Need?

A meat meal once a day is enough for a man at hard manual labor. It is a maximum amount for an ordinary adult or business man. The ordinary adult will not be at all harmed by omitting meat for several days a week, even if no special "protein" meat substitute is provided. As the people of the United States eat more meat per capita than the people of any other civilized nation except Australia, it surely will not hurt us to reduce our use of meat. What is needed is a hearty dish to take its place.

Do Growing Children Need Meat?

Mrs. Rose in "Feeding the Family" advises against giving meat to children until they are seven or eight years old. She says they not only do not need meat earlier, but that if they are given meat at an early age they are likely to acquire a taste for it and refuse to drink milk, which is much more necessary to them. Most authorities do not forbid meat to children, and perhaps withholding it to this age is extreme, but the opinion is cited to show that meat is not the absolute necessity so many people believe.

Why Too Much Meat is Bad.

It is claimed that the undue eating of protein is a strain on the kidneys which must excrete the nitrogenous products from the body. This cannot be proved, perhaps, but we know that certain diseases, either the result of uric acid production or of putrefaction in the intestines, seem to occur more often in the people who have eaten large amounts of protein in meat. We also know that eating meat tends to reduce the alkalinity of the blood, and that if meat replaces too much fruit and vegetables this may be a source of

danger. People who eat less protein seem to show more endurance than those who eat large amounts of protein; they tire less easily and do not get nearly so stiff and sore after severe exercise.

Other Advantages in Using only Moderate Amounts of Meat.

Meat is a very expensive part of our diet. A large share of the total amount which is spent for food is paid for meat. In normal times, they tell us, this should not be more than one-sixth of the total expenditure for food.

At the present time meat is usually high and scarce because of the recent epidemic of foot-and-mouth disease which destroyed so many cattle. Without the war, we are told, it would take from seven to ten years to get our herds into condition and back to normal size again. With the Argentine in the same condition from the same cause it is evident that we must reduce our consumption of meat. Now it is very probable that we shall never have very cheap meat again, because, as the large ranges of western land are brought under cultivation, there is less area for free feeding, and food for cattle becomes expensive.

Make Changes Slowly.

People who are used to meat like its flavor and miss it if suddenly deprived of it; therefore, in reducing the meat in this diet, make changes slowly. Work first to supply the flavor with less actual meat.

Making a Little Meat Go a Long Way.

Every housewife knows what to do if the chicken she buys for dinner is too small to roast. Cut up and stewed, with plenty of rice and gravy, the "flavor is extended" with the use of less meat. Such devices are one way of being economical in the use of meat.

SUGGESTIONS.

1. **Stews and Fricasseees and Casserole Dishes** made with plenty of rice or hominy or dumplings or baking-powder biscuits or vegetables. If made of meat already cooked, chop and add just long enough before the rest is done to warm thoroughly, otherwise meat is toughened.

2. **Meat-loaf, and Meat Cakes** when mixed with plenty of bread crumbs. Moisten with water before cooking or meat will be dry. These may be served with white, brown, onion or tomato sauce which will make them still more appetizing. Use tried-out meat fat for the fat in these sauces.

3. **Hash** made with potatoes and sautéd in meat fat; or hash warmed and served on toast without or with gravy.

4. **Creamed Meat** served in white, brown, or tomato sauce, made with meat fat. Serve on toast, in toast boxes, or patty shells, or in nests of potato, rice, hominy, or spaghetti, etc.; then meat will go still further.

5. **Meat Pies** made either with pie crust or mashed potato crust. Vegetables may be added.

6. **Scalloped Meat**, that is, chopped and baked, covered with "buttered" crumbs. Use beef fat or butterine for the crumbs. Meat may be mixed with chopped vegetables and go still farther, or put in alternate layers with rice, macaroni, or spaghetti. Gravy or tomato sauce may replace the white sauce.

7. **Meat Soufflé**. Meat chopped and mixed with thick white sauce and beaten egg, then baked in moderate oven. The meat may be mixed with chopped vegetables of all kinds, or with rice.

8. **Stuffed Meat**, as stuffed heart, veal birds, etc. Thin slices of meat may be spread with stuffing, rolled, and baked in casserole.

9. **Meat** served with *Yorkshire Pudding*, or Southern "Spoon Bread."¹

Yorkshire Pudding.

1 c. milk or water

$\frac{1}{2}$ c. corn meal

$\frac{1}{2}$ c. flour

² 2 tsp. baking powder

1 egg beaten slightly

$\frac{1}{4}$ tsp. salt

Grease a very hot shallow pan with beef fat; baste with fat from the pan in which beef is roasting. Cut in squares for serving.

10. **Croquettes**. Rice, hominy, etc., may be mixed with chopped meat, rolled in "buttered" crumbs and baked in oven instead of being fried. Or chopped meat may be added to fritter batter and fried in deep fat.

11. **Meat Salads** made with a little meat and plenty of vegetables.

12. **Scrambled Eggs and Omelets**, with chopped meat stirred or folded in.

13. **Meat Soups** made with cereal, (rice, hominy, oatmeal, barley, etc.; left-over breakfast foods of all kinds may be added) and almost any vegetables.

14. **Cream Soups and Chowders**. Cream soups made with half milk, half water in which a vegetable has been cooked, containing some fat and thickened with flour, or milk chowders, are very hearty dishes with which to begin a meal and make it possible to serve much smaller portions of meat following them. Almost any vegetable or combination of vegetables can be used. If the flavor is not strong enough merely from using the water, a little of the vegetable chopped up fine or rubbed through a sieve may

¹ See Wellman's "Food Study", p. 183.

² If sour milk is used, substitute $\frac{1}{2}$ tsp. soda for all the baking powder.

be added. This is an excellent way to use up small amounts of vegetables. For example, a good cream-of-pea soup can be made by boiling the pods in water and adding a few cooked peas, milk, etc. Water in which vegetables are cooked should be saved and used in soup, because of the salts which are extracted from the vegetables and which would otherwise be wasted. The liquid in which vegetables are canned may also be used in soup.

For each cup of soup allow 1 tbsp. of flour if the vegetable itself (cabbage, onion, cauliflower, etc.) has not thickening power, but only $\frac{1}{2}$ tbsp. if much of a starchy vegetable is used (potato, corn, peas, beans, etc.). Be sure the soup actually boils after the flour is added or its full thickening power will not be given and there will be a raw taste.

These dishes have an additional advantage because cheaper cuts of the meat or left-overs may be used in their preparation, or even meat already used for soup. The latter is still nutritious but needs flavor to make it palatable. If properly made, any of these dishes will be delicious. They furnish scope for originality and skill in the cooking, and add greatly to the variety of the diet.

Use Every Scrap of Meat, Fat, and Bone.

Bones of uncooked meat, of roasts and chops, etc., after cooking, bits of gristle, etc., can all be utilized to afford flavor and gelatine for soups and gravies. Any meat used in making soups should be eaten afterwards, for very little of anything but its flavor is given to the soup. Remember that the fat in meat stock should be removed and used in other ways, also that all the "trimmings" cut off after the meat is weighed at the butcher's belong to the purchaser.

Meat bought in larger quantities is cheaper. If you use ingenuity in preparing it in various ways, the same kind of meat can be used for some time without monotony. In cities, the butcher will sometimes corn a portion of the beef you buy and keep it back for you until asked to deliver it.

Cheaper cuts of meat are often better flavored and more nutritious. Good cooks can make cheaper meat appetizing. This is where French cooks excel.

We have unjustified prejudices against certain cuts of meat, or certain kinds of meat. Kidneys are in little demand here, but are considered a delicacy in England. Try broiled beef kidneys and fried heart, as well as the new kinds of fish coming in the market. Many people will not eat rabbit, a cheap and really delicious dish. We have grown used to the idea of pork and veal and chicken, but if we eat pigs we surely have no excuse for being squeamish.

Let us learn to be citizens of the world and eat what the world eats. It is usually the provincial person who is finicky.

MEAT SUBSTITUTES

Most people who are used to eating a great deal of meat declare that they are hungry if they try to do with less. They fail to realize that this is always the result of any sudden change of diet. Even when some men who had been vegetarians all their lives were induced to begin eating meat, their complaint was that it was not satisfying and they felt hungry. All changes, then, must be made gradually. If your family is used to meat three times a day, don't expect them to be satisfied if they are suddenly cut down to meat only once or twice a week.

Going without meat is often popularly understood to mean no change in the meal except the omission of the meat. Of course, to be satisfying, something else must be provided to take its place. This should be what is known as a hearty dish, — one that "stays by" you. It need not necessarily be protein, or even largely protein, because in an ordinary mixed diet, such as we Americans eat, the proportion of protein is usually very high anyway.

MEAT SUBSTITUTES HIGH IN PROTEIN

I. EGGS

Eggs make a good substitute for meat, and are often cheaper. Since their value will be discussed under the heading "Economy in Recipes", only ways of using them directly as a substitute for meat will be listed here.

1. *Eggs "boiled" or "dropped"* — easily digested dishes.

2. *Eggs fried*, especially when served with bacon or salt pork.

3. *Eggs as omelets*. These may be flavored in a great many ways. Try using orange-juice with a little lemon in place of the liquid, and folding in sliced orange. Add sugar as desired. Sweetened omelet, with jelly folded in, is delicious. Omelet may be made with fewer eggs if either flour or bread crumbs are added. Omelet will go farther if served with a medium white sauce, a cheese white sauce, or a tomato sauce folded in and poured around.

- a. *Omelet with Bread Crumbs*.

Add bread crumbs soaked in milk or water.

For each egg allow 2 tbsp. bread crumbs and 2 tbsp. milk.

b. Omelet with Flour.

Use a medium white sauce or a tomato sauce.

For each egg allow one cup of white sauce.

4. *Scrambled Eggs.*

One tablespoon of water or milk, or $\frac{1}{2}$ c. white sauce or tomato sauce or canned tomato for each egg, may be added before cooking, or grated cheese may be mixed with it.

5. *Eggs in Potato Nests.*

Eggs dropped, without breaking, into mashed potato (this may be beaten with pimento rubbed through a strainer).

Season with salt and pepper and place in oven until cooked to suit taste.

6. *Baked Eggs.*

Break an egg in a buttered cup, cover with "buttered" crumbs or white sauce seasoned with cheese and pepper, and bake till firm.

Eggs may also be placed in small tomatoes scooped out from the stem end, seasoned with "buttered crumbs", and baked.

7. *Stuffed Eggs.*

Cut hard-cooked eggs in half. Remove yolk, season with $\frac{1}{4}$ tsp. vinegar, a little salt, pepper, and mustard. Mold into ball with $\frac{1}{4}$ tsp. melted butter or oleo, and replace. May be served with white sauce poured over, or mixed with white sauce and "buttered crumbs" and baked until crumbs brown.

8. *Creamed Eggs.*

Hard-boiled eggs cut and served in white sauce.

Cheese may be added, or cooked macaroni, rice, etc. The whole may be covered with "buttered crumbs" and baked.

9. *Hard-Cooked Eggs on Toast.*

Slice eggs lengthwise and put on toast. Pour over a white sauce to which have been added boiled onions rubbed through a sieve.

10. *Egg Croquettes.*

Chop hard-cooked eggs and add enough white sauce to shape. Dip in egg and crumbs and fry in deep fat. Serve with this white sauce, cheese sauce, or tomato sauce.

II. CHEESE

Nutritive Value and Cost

Cheese is a very nutritious food,¹ and very cheap when compared with meat. An inch cube of American cream cheese is more than equal in total food value to an egg, or to an ounce of porterhouse

¹ See Wellman's "Food Study", p. 284.

or sirloin steak, and supplies as much protein as the latter. To put it in another way, one pound of cheese is equal to almost two pounds of such meat, and costs less than half as much.

How to Cook Cheese

Cheese should never be exposed to extremely high temperatures. Therefore, it is better to grate it, or break it up, and stir it with white sauce just as the latter is taken from the fire, or to cook it over water. If a dish is to be scalloped with cheese, the cheese should be mixed through, rather than sprinkled over the top where it is exposed to the full heat of the oven. The hard crust will be prevented from forming on top of such dishes as macaroni and cheese, if the dish is covered with "buttered crumbs."

1. *White Sauce Welsh Rabbit.*

Stir into a medium white sauce which is still very hot, some cheese, grated or cut ¹ in small pieces. Pour on toasted bread or crackers and serve at once.

2. *Cheese and Cereal.*

Cooked cereals, such as hominy, rice, macaroni, etc., may be stirred with milk in a saucepan. When hot, add cheese grated or cut ¹ into small pieces. Serve as soon as cheese is melted. For one cup of cereal allow $\frac{1}{4}$ lb. cheese, add milk as needed. Thin white sauce may be used in place of the milk.

The cereal, cheese, milk, or white sauce, may be placed in alternate layers in a greased dish, and covered with "buttered crumbs," then baked until crumbs are brown.

3. *English Monkey.*

Heat bread crumbs in milk in a sauce pan. When hot, stir in cheese and season to taste. May be served on toast. Use 1 tbsp. cheese to each cup of crumbs.

4. *Creamed Potatoes and Cheese.*

Heat boiled, or baked potatoes cut in cubes, in white sauce. Just before serving, stir in a little cheese. Allow 1 or 2 tbsp. cheese for each cup of potatoes.

5. *Cheese Pudding.*²

This is a delicious lunch or supper dish, and is very hearty. It is an excellent way to use up stale bread.

¹ Fresh cheese may be easily broken up by rubbing it through a coarse strainer or frying-basket.

² See Wellman's "Food Study", p. 281.

6. *Cheese Soufflé.*

To each third cup of thick white sauce add 3 tbsp. grated cheese and the yolk of one egg. Fold in the white, beaten stiff, pour in a greased dish and bake in a slow oven until firm. Test with a knife; when the knife comes out clean it is done. Serve at once.

Egg and Cheese Dishes are given under *Eggs* as Meat Substitutes.

III. FISH

*Nutritive Value and Cost*¹

Fish¹ is somewhat, but as a usual thing not much, cheaper than meat pound for pound, and is only slightly less nutritious. However, its use is to be recommended because it makes an acceptable meat substitute and it spares the demand on meat. Moreover, our supply of fish can be more easily increased than our supply of meat. If the cheaper fish is purchased, considerable saving can be made. Most shellfish are expensive. Oysters are costly for the amount of nutrition or protein obtained from them, but flavor often makes them welcome in place of meat.

Cheaper Fish

There are many fish being put upon the market now for which there was little demand a few years ago. Remember that demand usually means acquaintance, and let us not be afraid to try new kinds. Tuna fish was once scorned. Try carp and shark and all the rest, and see for yourself how good they are. Remember how many things children learn to eat.

No general recipe for fish, oysters, etc., will be given, except a few suggestions of how to make a little go a long way.

1. *Fish Hash.*

Left-over fish may be mixed with cooked potato, seasoned, and sautéed in suet or pork fat until brown on both sides.

2. *Creamed Fish and Scalloped Fish.*

Left-over fish may be served in white sauce on toast, or in toast boxes, or the fish may be mixed with "buttered crumbs." Chopped parsley may be stirred in for flavoring. If the fish is at all rich, no fat need be used in making the white sauce if whole milk is used; or skimmed milk with fat will be good. If the fish is strong flavored, as salmon or tuna fish, it can be mixed with

¹ See Wellman's "Food Study", pp. 203-206.

a generous amount of bread crusts. Chopped hard-boiled egg may be added.

3. *Fish Balls.*

Fish mixed with equal parts of potato. Season, add beaten egg and fry in deep fat.

4. *Fish Croquettes.*

Mix fish with thick white sauce. Allow about twice as much flaked fish as sauce. Dip in eggs and crumbs and fry, or roll in "buttered crumbs" and bake. If fish is strongly flavored, add bread crumbs.

5. *Scalloped Oysters.*

Oysters go farthest served scalloped. That is, placed in a greased baking-dish in alternate layers with "buttered crumbs", soaked and moistened with the liquid and a little added milk. Do not have more than two layers of oysters and do not over-bake.

6. *Oyster Stew and Creamed Oysters.*

The oysters used in making an oyster stew may be warmed and served next day as creamed oysters on toast. Make by adding oysters at the last moment to an equal amount of oysters creamed in the usual way.

7. *Fish Salad.*

Salmon and tuna fish, bought canned, are often served as salads. But almost any fish is excellent served in this way. It may be mixed with chopped celery, or chopped cucumber, or chopped tomato, or with a combination of them. It is good served in a nest of chopped spinach or other greens, or mixed with chopped hard-boiled eggs.

8. *Fish Chowder.*

This is a dish too often considered a shore dish, but it can be deliciously made from fish to be obtained in any part of the country.

To make, cut some salt pork into cubes and fry. Then in the tried-out fat, fry some onions. Add water (or if fish used furnishes head, tail, and backbone, put these into cold water, bring to boil, and simmer twenty minutes; use this stock in place of the water) and diced potatoes and cook until nearly soft. Then add fish cut in small pieces, and milk. Simmer ten minutes to cook the fish. Season and add the pork cubes, and crackers if desired.

IV. PEAS AND BEANS

Peas and beans are high in protein and are hearty foods as well, so that they make good substitutes for meat. Bought dry they are usually inexpensive food even when the fuel necessary to cook them is counted. Various kinds of dried legumes are to be had, all

inexpensive; white beans, lima beans, navy beans, kidney beans, black beans; lentils, split white, yellow, or split green peas, whole green peas, and black-eyed peas, are all common.

One pound of these dried legumes is more nutritious than a pound of most meat. Lima beans are the least likely to cause digestive disturbances.

People who have gas stoves can often cook such foods as this on the ledge inside the furnace. If placed in a fireless cooker without a soapstone, it usually takes two heatings to get them thoroughly done.

To prepare the dried legumes, soak them overnight, and start cooking them in plenty of cold water. Usually about three hours of cooking is necessary to make them tender. Split peas cook in a little less time, and navy beans take half an hour longer.

1. *Boiled Beans with Tomato.*

Beans of any variety — white, navy, kidney — and black-eyed peas are good boiled, with canned tomato added during the last part of the cooking. Onion may be used for seasoning if desired. Rice or macaroni may be added.

2. *Creamed Beans.*

Lima beans and kidney beans are good served with white sauce, or tomato sauce.

3. *Bean Loaf.*

Cooked beans of any variety, mashed and mixed with grated cheese, with enough bread crumbs added to make a roll, should be baked in a moderate oven, basting with hot water and fat. Allow $\frac{1}{2}$ lb. cheese for 1 pint cooked beans. Serve with tomato or onion sauce.

Kidney beans are especially good prepared in this way.

4. *Lima Bean or Pea Salad.*

Cold beans, if not sweetened in cooking, make excellent salad, as do cold peas. Lima beans, alone or with chopped celery, and French dressing, are especially good.

5. *Baked-bean Soup.*

Allow 1 c. baked beans for each pint of water.

Bring to boiling, then simmer 30 minutes. Thicken with 1 tbsp. flour stirred in a little cold water. More fat may be added, and tomato or onions may be used for seasoning.

6. *Legume Soups.*

Any of the legumes, or combinations of them, make excellent hearty soups. Corn, tomatoes, or onions may also be combined with them. The vegetables may be left whole or rubbed through a strainer.

Soak dried legumes for 8 to 10 hours. Drain and boil in twice their bulk of water until soft. Thicken with flour. Allow about $\frac{1}{3}$ c. of dried legumes for each cup of soup.

V. OTHER HEARTY DISHES

Since it is not at all necessary that the protein needed in the diet be supplied by meat, it is entirely possible to use substitutes which are not especially high in protein and to supply the protein in other ways, as, for example, in desserts to serve at dinners furnishing meat substitutes which are not markedly high in protein.

1. *Vegetable Soufflé.*

Allow 2 eggs and $\frac{1}{2}$ c. of chopped vegetables to each cup of thick white sauce, mix the beaten yolks with the white sauce, and chopped cooked vegetable; then fold in whites, beaten stiffly. Bake in greased baking-dish, set in a pan of water. It may be covered with "buttered crumbs." Cut with knife to test when done. Knife should come out clean.

This is an excellent way to use small amounts of vegetables. Mixtures of vegetables may be used.

2. *Scalloped Vegetables.*

Mix canned corn, boiled macaroni, cooked cabbage, or almost any other vegetable, with white sauce. Place in a greased baking-dish and cover with "buttered crumbs." Heat in oven until crumbs are brown. Cheese may be added to the white sauce and increase its food value as well as its protein.

3. *Meatless Stew.*

Fry onions in a little meat fat—beef drippings, salt pork, or bacon. Add diced potatoes, carrots, and turnips. Simmer until all the vegetables are tender. This may be thickened with flour. More fat may be added and small pieces of crisp bacon or salt pork. This has a delicious flavor and avoids the tough stringy pieces of meat usually found in stew. It may be served with dumplings. Macaroni may be added, or any other cereals.

4. *Jungle Stew.*

A similar stew may be made with beans, macaroni or rice, and tomatoes. Fry onion as before, add beans (already cooked) with cereal and tomato (which may be canned).

5. *Turkish Pilaf without Stock.*

Wash rice, cook in a little fat until brown, add boiling water, and steam. When water is absorbed add canned tomato and cook until rice is soft. Onion may be added.

To $\frac{1}{2}$ c. rice allow 1 c. boiling water and $1\frac{1}{2}$ c. of tomato.

6. *Bacon.*

With the advanced price, this is often considered a high-priced food. While this is true if the bacon is used as an accessory, it does not follow if it is used as a meat substitute. Even when a pound of bacon costs forty cents, it is only twice as expensive, say, as round steak costing perhaps twenty cents, but it furnishes over five times as much nutrition, pound for pound. Since in serving it goes a good deal further than meat, it should be considered a cheap substitute for expensive meat, and a possible one for cheaper meat. However, it is probable that war prices will make it necessary to buy little bacon of any type. Bacon "strips", the odd-shaped pieces cut from the side in trimming, are less expensive than regular bacon.

Bacon should be sliced very thin. If it is too salt, dip the slices for a moment in warm water. Bacon is most easily cooked on a rack placed in a pan in the oven. If no rack is used, pour off the melted fat as it accumulates during the cooking.

7. *Salt Pork and Gravy.*

Salt pork, fried crisp, served with gravy made from the tried-out fat, flour and milk, makes an unusual meat substitute, and a very cheap one.

8. *Baked Bananas.*

Remove skin, slice lengthwise. Dot with fat and sprinkle lightly with sugar. Bake until brown. Lemon juice may be added.

9. *Fried Bananas.*

Cut in quarters and fry. Sugar may be added.

10. *Banana Salad.*

Cut in half lengthwise. Serve on lettuce with boiled dressing. Sprinkle with ground peanuts.

11. *Banana Fritters.*

Cut in pieces, sprinkle with sugar, add lemon, if desired, drop in fritter batter and fry in deep fat. For batter, for 1 c. liquid use $\frac{3}{4}$ c. flour, $\frac{1}{2}$ egg, and $\frac{1}{4}$ tsp. salt.

12. *Corn Fritters.*

Sift flour, baking-powder, salt and pepper, together. Add canned corn, preferably chopped. Add beaten egg, and drop by spoonfuls in a hot greased frying-pan or griddle. Turn when brown.

For one can of corn, allow 1 c. flour, 2 tsp. baking-powder and 1 egg.

13. *Fried Cereal Mush.*

Pack warm cereal mush in a pan or can. When cold, cut in slices, dip in flour, or in flour and egg, and fry. Serve with syrup.

Hominy, corn meal, oat meal, etc., are all suitable for use in this way.

14. *Cereal Cullets.*

Mold cereal and slice as for frying. Roll in "battered crumbs" and bake in quick oven until brown. Serve with butter or syrup.

STARCHES AND SUGARS

Starchy food should make up the bulk of the diet if the whole is to be inexpensive. Cereals and starchy vegetables are excellent food and cheap.

Sugars,¹ while desirable, are not necessary in the diet because starch, in digestion, is changed into sugar and so supplies the body with the same material. However, sugar is quickly digested and is usually not expensive.

VEGETABLES

Vegetables should be used somewhat freely, if possible. Potatoes are inexpensive and valuable food. Too often the housewife prepares these in only one or two ways. Variety should be secured by using more methods.²

Much valuable mineral matter is lost³ if vegetables are boiled and the water is discarded. Such water should be used in making sauces or soups, or added to gravy.

If the water cannot be used, the vegetables should be baked, steamed, or sautéed for variety.

FAT

The Federal Food Administration tells us that we eat and waste about 240 per cent more fat than we need. Saving this waste is one way of economizing. Another consists in not using expensive fats where cheaper ones will serve. So far as we know, all pure fats have equal food value.

E. USES OF LEFT-OVERS

With skill, left-overs may be made as pleasing as the original dish. Too often they are put away in the ice-box until they spoil and are then thrown out. This is not economy.

¹ Wellman's "Food Study", pp. 160-161, 163-167.

² Fannie M. Farmer: Boston Cooking School Cook Book, Revised ed., pp. 309-321.

³ Wellman's "Food Study", p. 149.

Almost anything, except left-over desserts, can be used in soups; undesirable, gristly meat, left-over portions, vegetables, water in which vegetables or meats have been cooked, hot water that has been used to rinse out the pans in which meat has been cooked or vegetables served, grains, cereals, even the well-washed parings of vegetables, may be added for flavor and for their mineral salts.

Left-over meat and fish may make chowder, stews, pies, hash, soufflés or salads, or they may be served minced or creamed. Rind of bacon and salt pork may be cooked with green vegetables or used to flavor soups.

Left-over vegetables make delicious salads, or may be mixed with each other to appear again as a "vegetable." For example, peas and carrots may be mixed, etc.

Soft-boiled eggs, left over, can be cooked hard and used for creaming, or garnishing; or they may be chopped fine and added to vegetables or chopped meat.

Left-over cereals may be fried, made into griddlecakes, added to muffins, put into soups or gravies, mixed with meat or vegetables for pies, or scalloped dishes, stews and soufflés. They may also be sweetened, mixed with fruit and spice, and appear as puddings.

Slightly dry bread or biscuits may be freshened by moistening the crust and reheating in a covered pan. Toast, milk toast, cream toast, tomato sauce toast, fried toast and croutons may all be made out of dry bread. Scalloped dishes all call for bread crumbs. Finely ground bread or cracker crumbs may be used in place of flour in making griddlecakes, muffins, cake, etc., or as thickening in soups.

Unless bread has been thoroughly dried in the oven it should not be kept in a closed jar or tin. Store it in an open bowl or paper bag in a cupboard away from dust. If stored while it still contains moisture, it will acquire a stale, musty taste.

F. ECONOMY IN RECIPES

Many people do not realize that it is often possible to use an expensive or a cheap recipe for the same dish with little difference in result. Otherwise desirable recipes that are extravagant can readily be modified by a little thought. Of course, if we have less rich concentrated food, we shall need more food, but the probability is that this will be all the better for our digestions. Here are some suggestions:

FAT

Do not use butter in cakes, cookies, and pies. Try cutting down the amount of fat used in a recipe until you are sure you have used as little as possible. If pure fats are substituted for butter use four-fifths of the amount of the butter to get the same result.

Fat from stock or from cooking meats should be saved. Beef and chicken fat, tried out, may be used in cakes, cookies, gravies, soups, etc.; bacon fat is good in corn cakes, meat sauces, and soups made from legumes, and meatless stews; sausage fat is useful for spiced cookies, gingerbread, and poultry stuffing. Any of these can be used in sautéing vegetables, or in basting. Fat unusable in cooking should be sold or made into soap, not thrown away.

EGGS

The number of eggs in a recipe can usually be cut materially or even omitted entirely. For eggs used as leavening, substitute a teaspoon of baking powder for each egg omitted, but here some egg must be used. The egg may often be omitted if a food is to be dipped in crumbs or meal, and fried. If the egg is used, allow two to three tablespoons of water to each egg.

Dried egg powders are sold. They may be used in baking, in muffins, griddle cakes, etc., or whenever they are not depended upon for leavening. They are a great saving.

MILK

Water may be used as the liquid in place of milk in all muffin and cake mixtures. Skimmed milk may also be used.

CREAM

Cream, whipped, goes farther than plain cream. Stiffly-beaten white of egg, when eggs are cheap, may be beaten into whipped cream. Some kinds of cream-whips will whip thin cream. It is more economical to use one than to beat heavy cream with an egg-beater.

SALAD-DRESSING

Olive oil is expensive, cotton-seed and corn oils less so. The latter make a good substitute in mayonnaise if too much salt is not added. These are, however, more expensive than boiled dressings thickened partly with flour, partly with egg. Sour cream, sweetened with sugar and flavored with vinegar, makes an excellent dressing.

SUGAR

Very sour fruits may be sweetened with less sugar if a little soda is added. Fruit preserves may be made with far less sugar if salt is used. They must be kept a few days before using, so that the salty taste is no longer distinguishable. Allow three-fourths of a cup of sugar and one and one-fourth of a teaspoon of salt to one pound of fruit.

JELLIES AND JAMS

The more expensive fruits may be used for flavor, and the bulk of a preserve or jelly made out of less expensive material. For example, rhubarb may be added to blackberry, strawberry, or raspberry jam; carrots may be added to conserve, and apples used in fruit jellies.

If only one extraction for jelly is made, the pulp makes good marmalade.

Watermelon rind makes excellent pickle; orange and grapefruit peel are good candied.

YEAST

Dry yeast is cheaper than compressed. If dry yeast is used, bread must be made by the "long process."

If bread is frequently made in large quantities, it is economy to make liquid yeast.

LIQUID YEAST

4 medium-sized potatoes	1 cake dry yeast, softened in $\frac{1}{4}$ cup of warm water, or
1 quart hot water	1 cake of compressed yeast
1 teaspoon salt	$\frac{1}{4}$ cup sugar

Wash, pare and cook the potatoes in the water. Drain, mash and return to the water. Make up to one quart. Add the sugar and salt and allow the mixture to cool. When lukewarm add the yeast. Keep at room temperature (65° to 70° F.) for 24 hours before using. If kept for a longer time it should be poured into a sterilized jar and put in a dark, cool place.

$\frac{1}{4}$ c. liquid yeast may be used in place of $\frac{1}{4}$ compressed yeast cake and $\frac{1}{4}$ c. of water in a bread recipe if the "short process" is followed. If the bread is made by the "long process" use 2 tbsp. of the liquid yeast for $\frac{1}{8}$ compressed yeast cake.

G. ECONOMY IN FUEL

Economy in fuel is also worthy of consideration. Unless the cook stove is also used for heating, it is costly to run it unnecessarily. A fireless cooker soon pays for itself under such circumstances, especially if gas or electricity is used for cooking. A serviceable one may be made at home.¹

With a gas stove, if the family is small, it pays to use a small portable oven ² over a burner on the top of the stove.

In general, care should be taken that a burner is not lighted before one is ready to use it, and that it is turned out as soon as possible; also that the flame be turned as low as possible in boiling vegetables after actual boiling has begun.

Much can be done by planning to bake several things at once when the oven must be used.

¹ A free bulletin may be obtained from U. S. Dept. of Agriculture, Farmers' Bulletin, 100, 298, "The Fireless Cooker."

² See Wellman's "Food Study", p. 113.

TABLE OF COST

100-CALORIE PORTIONS OF FOODS

AND FACTORS FOR CALCULATING THEM

The prices used in this table are those that foods were sold for during 1916 or 1917, and are intended to show the usual relative cost of food from the fuel-value standpoint.

To bring up to date, multiply the factor given in column III by the present price per pound (or per dozen, quart, etc., if so stated) and use the result obtained in place of the one given in column IV.

The foods are grouped to bring out the comparative cost of like foods.

If the commodity is sold by the pound the factor in column III is obtained by dividing one cent by the number of 100-calorie portions in one pound. This is equivalent to dividing 100 by the full value per pound.

When the commodity is not sold by the pound, the factor is obtained by dividing one by the weight, expressed in pounds, of the quart, peck, or dozen, and then dividing that by the number of 100-calorie portions in a pound.

I	II	III	IV	V
NAME OF FOOD	FUEL VALUE PER POUND	FACTOR TO BE MULTIPLIED BY PRICE TO OBTAIN V	SPECIAL PRICE USED TO OBTAIN COST GIVEN IN V	COST OF 100-CALORIE PORTION AT PRICE GIVEN IN IV, EX- RESSED IN CENTS AND FRACTIONS OF A CENT
Berries:				
Blackberries . .	262	0.278 ¹	18¢ per qt.	5.00
Cranberries . .	212	0.472	15¢ per lb.	7.08
Currants . . .	259	0.280 ¹	18¢ per qt.	5.04
Raspberries, red	247	0.294 ¹	20¢ per qt.	5.88
Strawberries . .	168	0.432 ¹	12½¢ per qt.	5.40
Bread:				
Boston Brown .	1026	0.097	5¢ per lb.	0.49
Graham . . .	1189	0.084	5¢ per lb.	0.42
Rye	1153	0.087	5¢ per lb.	0.44
White	1174	0.085	5¢ per lb.	0.43
Whole wheat .	1113	0.090	5¢ per lb.	0.45
Butter (see Fats)				

¹ Calculated on the basis that one quart of berries weighs 22 ounces.

TABLE OF COST OF 100-CALORIE PORTIONS OF FOODS 29

I	II	III	IV	V
NAME OF FOOD	FUEL VALUE PER POUND	FACTOR TO BE MULTIPLIED BY PRICE TO OBTAIN V	SPECIAL PRICE USED TO OBTAIN COST GIVEN IN V	COST OF 100-CALORIE PORTION AT PRICE GIVEN IN IV, EX- RESSED IN CENTS AND FRACTIONS OF A CENT
Cereals (see also Bread):				
Barley, Pearl . .	1615	0.062	10¢ per lb.	0.62
Corn meal . . .	1620	0.062	6¢ per lb.	0.37
Corn flakes . . .	1631	0.061	20¢ per lb. [10¢ for 8 oz. pkg.]	1.22
Cornstarch . . .	1632	0.061	10¢ per lb.	0.61
Cream of wheat	1641	0.061	15¢ per lb.	0.91
Flour, barley . .	1603	0.062	8¢ per lb.	0.50
Flour, buckwheat	1577	0.063	10¢ per lb.	0.63
Flour, Graham . .	1628	0.061	4¢ per lb.	0.24
Flour, rye . . .	1588	0.063	4¢ per lb.	0.25
Flour, white . . .	1603	0.062	4¢ per lb.	0.25
Flour, whole wheat . . .	1630	0.061	4¢ per lb.	0.24
Grapenuts . . .	1683	0.059	20¢ per lb. [15¢ for 12 oz. pkg.]	1.18
Hominy, un- cooked . . .	1608	0.062	6¢ per lb.	0.37
Macaroni . . .	1625	0.062	10¢ per lb.	0.62
Noodles . . .	1625	0.062	10¢ per lb.	0.62
Oatmeal, Rolled Oats . . .	1803	0.056	6.7¢ per lb. [10¢ for 1½ lb. pkg.]	0.38
Oatmeal, steel cut	1811	0.055	6¢ per lb.	0.33
Popcorn . . .	1826	0.055	10¢ per lb.	0.55
Rice . . .	1591	0.063	10¢ per lb.	0.63
Shredded wheat	1660	0.060	16¢ per lb. [12¢ for 12 oz. pkg.]	0.96
Tapioca, Minute	1608	0.062	20¢ per lb. [10¢ for 8 oz. pkg.]	1.24
Cheese (see Dairy Products)				

I	II	III	IV	V
NAME OF FOOD	FUEL VALUE PER POUND	FACTOR TO BE MULTIPLIED BY PRICE TO OBTAIN V	SPECIAL PRICE USED TO OBTAIN COST GIVEN IN V	COST OF 100-CALORIE PORTION AT PRICE GIVEN IN IV, EX- RESSED IN CENTS AND FRACTIONS OF A CENT
Chocolate and Co- coa (see Sweets)				
Crackers:				
Boston crackers	1237	0.054	8¢ per lb.	0.43
Graham crackers	1904	0.052	15¢ per lb.	0.78
Oatmeal crackers	1920	0.052	10¢ per lb.	0.52
Oyster crackers .	1914	0.052	10¢ per lb.	0.52
Saltines . . .	1952	0.051	10¢ per lb.	0.51
Soda crackers .	1875	0.053	8¢ per lb.	0.42
Water crackers .	1790	0.056	15¢ per lb.	0.84
Cream (see Dairy Products)				
Dairy Products				
Butter (see Fats)				
Buttermilk . .	166	0.278 ¹	6¢ per qt.	1.67
Cheese, American	1994	0.050	25¢ per lb.	1.25
Condensed, sweetened . .	1480	0.068	40¢ per lb. [20¢ for 8 oz.]	2.72
Condensed, unsweetened	757	0.132	20¢ per lb. [10¢ for 8 oz.]	2.64
Cream, thin (18%) . . .	880	0.058 ²	40¢ per qt.	2.32
Cream, thick (40%) . . .	1727	0.029 ³	60¢ per qt.	1.74
Skimmed milk .	166	0.278 ⁴	5¢ per qt.	1.39
Whole milk . .	314	0.148 ⁵	10¢ per qt.	1.48

¹ Calculated on the basis that 1 qt. of buttermilk weighs 2 lb. 2.6 oz. or 980 g.

² Calculated on the basis that 1 qt. of thin cream weighs 1 lb. 15.6 oz. or 896 g.

³ Calculated on the basis that 1 qt. of thick cream weighs 1 lb. 15 oz. or 880 g.

⁴ Calculated on the basis that 1 qt. of skimmed milk weighs 2 lb. 2.6 oz. or 980 g.

⁵ Calculated on the basis that 1 qt. of whole milk weighs 2 lb. 2.4 oz. or 976 g.

I	II	III	IV	V
NAME OF FOOD	FUEL VALUE PER POUND	FACTOR TO BE MULTIPLIED BY PRICE TO OBTAIN V	SPECIAL PRICE USED TO OBTAIN COST GIVEN IN V	COST OF 100-CALORIE PORTION AT PRICE GIVEN IN IV, EX- PRESSED IN CENTS AND FRACTIONS OF A CENT
Eggs without shell	672	0.114 ¹	{ 50¢ per doz. 35¢ per doz. 25¢ per doz.	{ 5.70 3.99 2.85
Fats (see Oils):			{ 60¢ per lb. 45¢ per lb. 35¢ per lb.	{ 1.74 1.31 1.02
Butter	3488	0.029	{ 18¢ per lb. 50¢ per qt. 20¢ per lb.	{ 0.43 6.60 0.48
Cottolene	4082	0.024	{ 50¢ per lb. 35¢ per lb. 25¢ per lb.	{ 1.45 1.02 0.73
Cotton-seed oil	4082	0.132 ²	100¢ per qt.	13.32
Lard	4082	0.024	25¢ per lb.	0.70
Oleomargarine	3410	0.029	15¢ per lb.	0.44
Olive oil	4082	0.132 ²		
Salt pork	3575	0.028		
Suet, beef	3425	0.029		
Fish:				
Bluefish	206	0.485	23¢ per lb.	11.16
Codfish, steaks	329	0.304	12¢ per lb.	3.65
Codfish, salt	515	0.194	20¢ per lb.	3.88
Halibut	457	0.219	30¢ per lb.	6.57
Herring, smoked	731	0.137	25¢ per lb.	3.43
Lobster, canned	382	0.262	70¢ per lb.	18.34
Oysters	222	0.300 ³	40¢ per qt.	12.00
Salmon, fresh	582	0.172	20¢ per lb.	3.44
Salmon, canned	660	0.152	10¢ per lb.	1.52
Sardines	924	0.108	40¢ per lb.	4.32
Tuna	560	0.179	34.3¢ per lb.	6.14
			[30¢ for 14 oz. can]	
Whitefish	315	0.314	15¢ per lb.	4.71
Flour (see Cereals)				
Fruit (see Berries):				
Apples, fresh	214	0.037 ⁴	60¢ per pk.	2.22

¹ Calculated on basis that 1 dz. eggs without shell weighs 1 lb. 5 oz. or 50 g. per egg.

² Calculated on the basis that 1 qt. of oil weighs 1 lb. 13.7 oz.

³ Calculated on basis that 1 qt. of oysters weighs 1 lb. 8 oz.

⁴ Calculated on basis that 1 pk. of apples weighs 12½ lb.

I	II	III	IV	V
NAME OF FOOD	FUEL VALUE PER POUND	FACTOR TO BE MULTIPLIED BY PRICE TO OBTAIN V	SPECIAL PRICE USED TO OBTAIN COST GIVEN IN V	COST OF 100-CALORIE PORTION AT PRICE GIVEN IN IV, EX- RESSED IN CENTS AND FRACTIONS OF A CENT
Fruit — Cont.				
Apples, dried .	1318	0.076	10¢ per lb.	0.76
Apricots, dried .	1260	0.079	25¢ per lb.	1.98
Bananas . . .	290	0.345	7½¢ per lb.	2.59
Cherries, candied	1578	0.063	50¢ per lb.	3.15
Cherries, canned	407	0.246	16¢ per lb.	3.94
			[40¢ for 2½ lb.]	
Citron	1487	0.067	30¢ per lb.	1.41
Currants, dried .	1459	0.069	15¢ per lb.	1.04
Dates, dried . .	1416	0.071	10¢ per lb.	0.71
Figs, dried . .	1437	0.070	20¢ per lb.	1.40
Grapes	328	0.051	20¢ per bas-	1.02
			ket [6 lbs.]	
Lemons	140	0.286 ¹	25¢ per doz.	7.15
Olives	993	0.067 ²	40¢ per qt.	2.68
Oranges	169	0.148 ³	40¢ per dz.	5.92
		{ 0.013	{ 200¢ per bu.	{ 2.60
Peaches, fresh .	153	{ 0.217 ⁴	{ [50 lb.]	{
			30¢ per doz.	6.51
Peaches, canned	213	0.469	10¢ per lb.	4.69
			[25¢ for 2½ lb.	
			can]	
Pears, fresh . .	245	0.408	1.5¢ per lb.	0.61
			[75¢ a bu.	
			(50 lb.)]	
Pears, canned .	344	0.290	10¢ per lb.	2.90
			[25¢ for 2½ lb.	
			can]	
Pineapple, canned	696	0.144	10¢ per lb.	1.44
			[25¢ for 2½ lb.	
			can]	
Prunes	1161	0.086	15¢ per lb.	1.29
Raisins, seeded .	1563	0.064	12¢ per lb.	0.77
Raisins, layer .	1407	0.071	30¢ per lb.	2.13

¹ Calculated on basis that 1 doz. lemons weigh 2 lb. 8 oz.² Calculated on basis that 1 qt. olives weighs 1 lb. 8 oz.³ Calculated on the basis that 1 doz. medium oranges weigh 4 lb.⁴ Calculated on the basis that 1 doz. peaches weigh 3 lb.

TABLE OF COST OF 100-CALORIE PORTIONS OF FOODS 33

I	II	III	IV	V
NAME OF FOOD	FUEL VALUE PER POUND	FACTOR TO BE MULTIPLIED BY PRICE TO OBTAIN V	SPECIAL PRICE USED TO OBTAIN COST GIVEN IN V	COST OF 100-CALORIE PORTION AT PRICE GIVEN IN IV, EX- RESSED IN CENTS AND FRACTIONS OF A CENT
Fruit—Cont.				
Rhubarb . . .	62	1.613	5¢ per lb.	8.07
Watermelon . .	57	1.754	3¢ per lb.	5.26
Gelatine	1662	0.060	240¢ per lb. [15¢ per 1 oz. pkg.]	14.40
Meats:				
Bacon	2597	0.039	25¢ per lb.	0.98
Beef, dried . .	760	0.132	40¢ per lb.	5.28
Beef, heart . .	1277	0.078	12½¢ per lb.	0.98
Beef, liver . .	539	0.186	10¢ per lb.	1.86
Porterhouse steak	1075	0.093	28¢ per lb.	2.60
Beef, rib, roast .	1078	0.093	25¢ per lb.	2.33
Beef, round, lean	652	0.153	22¢ per lb.	3.37
Beef, sirloin . .	960	0.104	25¢ per lb.	2.60
Beef, tenderloin .	1290	0.078	75¢ per lb.	5.85
Beef, tongue . .	530	0.189	15¢ per lb.	2.84
Chicken, young .	289	0.346	35¢ per lb.	12.11
Fowl	751	0.133	25¢ per lb.	3.33
Ham, fresh . .	1302	0.077	25¢ per lb.	1.93
Ham, smoked . .	1621	0.062	35¢ per lb.	2.17
Ham, deviled . .	1738	0.057	105¢ per lb. [18¢ for 2¾ oz.]	5.99
Lamb, loin chops	1274	0.078	25¢ per lb.	1.95
Lamb, leg . .	844	0.118	25¢ per lb.	2.95
Mutton, leg . .	874	0.114	20¢ per lb.	2.28
Pork, chops . .	1231	0.081	22¢ per lb.	1.78
Pork, tenderloin	874	0.114	30¢ per lb.	3.42
Sausage, pork . .	1642	0.061	22¢ per lb.	1.34
Sausage, beef . .	525	0.190	18¢ per lb.	3.42
Sausage, Wiener- wurst	1439	0.069	15¢ per lb.	1.04
Turkey	1043	0.096	30¢ per lb.	2.88
Veal, cutlets . .	671	0.149	25¢ per lb.	3.72
Veal, leg . . .	569	0.176	30¢ per lb.	5.28
Milk (see Dairy Products)				

I	II	III	IV	V
NAME OF FOOD	FUEL VALUE PER POUND	FACTOR TO BE MULTIPLIED BY PRICE TO OBTAIN V	SPECIAL PRICE USED TO OBTAIN COST GIVEN IN V	COST OF 100-CALORIE PORTION AT PRICE GIVEN IN IV, EX- RESSED IN CENTS AND FRACTIONS OF A CENT
Molasses (see Sweets)				
Nuts:				
Almonds, shelled	1615	0.062	70¢ per lb.	4.34
Butternuts . .	417	0.240	20¢ per lb.	4.80
Chestnuts . . .	920	0.109	15¢ per lb.	1.64
Cocanuts, fresh	1369	0.073	20¢ per lb. [10¢ for ½ lb. nut]	1.46
Cocanuts, pre- pared . . .	3028	0.033	80¢ per lb. [10¢ for 2 oz.]	2.64
Peanuts, butter .	2741	0.036	20¢ per lb.	0.72
Peanuts, shelled	2487	0.040	30¢ per lb.	1.20
Peanuts, unshelled . .	1877	0.053	20¢ per lb.	1.06
Walnuts . . .	859	0.116	20¢ per lb.	2.32
Oils (see Fats)				
Soups, canned:				
Celery, cream of	243	0.412	10¢ per lb.	4.12
Chicken gumbo .	191	0.524	10¢ per lb.	5.24
Corn, cream of .	265	0.377	10¢ per lb.	3.77
Pea, cream of .	261	0.383	10¢ per lb.	3.83
Tomato . . .	179	0.559	10¢ per lb.	5.59
Vegetable . . .	62	1.613	10¢ per lb.	16.13
Sweets:				
Chocolate . . .	2772	0.036	45¢ per lb.	1.62
Cocoa powder .	2256	0.044	45¢ per lb.	1.98
Doughnuts . .	1942	0.069 ¹	10¢ per doz.	0.69
Fig bars . . .	1619	0.062	20¢ per lb.	1.24
Gingersnaps . .	1848	0.054	15¢ per lb.	0.81
Honey	1480	0.068	22.9¢ per lb. [20¢ for 14 oz.]	1.56
Marmalade, orange . . .	1550	0.065	50¢ per lb. [25¢ for 8 oz.]	3.25

¹ Calculated on the basis that 1 doz. doughnuts weigh 12 oz.

TABLE OF COST OF 100-CALORIE PORTIONS OF FOODS 35

I	II	III	IV	V
NAME OF FOOD	FUEL VALUE PER POUND	FACTOR TO BE MULTIPLIED BY PRICE TO OBTAIN V	SPECIAL PRICE USED TO OBTAIN COST GIVEN IN V	COST OF 100-CALORIE PORTION AT PRICE GIVEN IN IV, EX- RESSED IN CENTS AND FRACTIONS OF A CENT
Sweets — Cont.				
Molasses, cane .	1300	0.077	6.3¢ per lb. [15¢ for 2 lb. 6 oz.]	0.49
Sugar, white . .	1814	0.055	9¢ per lb.	0.50
Sugar, brown . .	1724	0.058	6¢ per lb.	0.35
Syrup, maple . .	1160	0.031 ¹	35¢ per qt.	1.09
Vanilla wafers .	1990	0.050	25¢ per lb.	1.25
Vegetables:				
Asparagus, fresh	101	0.990	10¢ per lb.	9.90
Asparagus, canned . . .	82	1.220	25¢ per lb.	30.50
Beans, baked . .				
canned . . .	583	0.172	12¢ per lb. [15¢ for 1½ lb. can]	2.06
Beans, dried . .	1564	0.064	10¢ per lb.	0.64
Beans, Lima, fresh . . .	250	0.400	15¢ per lb.	6.00
Beans, Lima, dried . . .	1586	0.063	10¢ per lb.	0.63
Beans, Lima, canned . . .	350	0.286	12¢ per lb. [15¢ for 1½ lb. can]	3.43
Beans, string, fresh . . .	176	0.568	8¢ per lb.	4.54
Beans, string, canned . . .	93	1.075	12¢ per lb.	12.90
Beets	167	0.599	2¢ per lb.	1.20
Cabbage	121	0.826	5¢ per lb.	4.13
Carrots	159	0.629	4¢ per lb.	2.52
Cauliflower . .	138	0.725	10¢ per lb.	7.25
Celery	68	1.470	10¢ per lb.	14.70
Corn, canned . .	445	0.225	12¢ per lb.	2.70
Cucumbers . . .	68	1.470	10¢ per lb.	14.70
Lentils	1581	0.063	15¢ per lb.	0.95

¹ Calculated on the basis that 1 qt. of maple syrup weighs 2½ lb.

I	II	III	IV	V
NAME OF FOOD	FUEL VALUE PER POUND	FACTOR TO BE MULTIPLIED BY PRICE TO OBTAIN V	SPECIAL PRICE USED TO OBTAIN COST GIVEN IN V	COST OF 100-CALORIE PORTION AT PRICE GIVEN IN IV, EX- RESSED IN CENTS AND FRACTIONS OF A CENT
Vegetables — Cont.				
Lettuce . . .	72	1.389	10¢ per lb.	13.89
Mushrooms . .	203	0.493	75¢ per lb.	36.98
Onions	200	0.500	4¢ per lb.	2.00
Parsnips . . .	236	0.424	4¢ per lb.	1.70
Peas, fresh . .	251	0.398	5¢ per lb.	1.99
Peas, canned . .	251	0.398	12¢ per lb.	4.78
Peas, dried, split	1612	0.062	10¢ per lb.	0.62
Potato, chips . .	2596	0.039	60¢ per lb.	2.34
			[15¢ for 4 oz.]	
Potato, sweet . .	447	0.224	5¢ per lb.	1.12
Potato, white . .	302	0.331	3¢ per lb.	0.99
Pumpkins . . .	59	1.694	1½¢ per lb.	2.54
Spinach	109	0.917	6¢ per lb.	5.50
Squash	103	0.971	1½¢ per lb.	1.46
Tomatoes, fresh	104	0.962	{ 15¢ per lb. 5¢ per lb.	{ 14.43 4.81
Tomatoes, canned	103	0.971	7½¢ per lb.	7.28
Turnips	124	0.806	3¢ per lb.	2.42



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